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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,022	10/07/2005	Tao Yang	L4050.0003	2715

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EXAMINER	
GUZMAN, APRIL S	

ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
11/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,022	YANG ET AL.	
	Examiner	Art Unit	
	APRIL S. GUZMAN	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/16/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The Examiner acknowledges the receipt of the Applicant's amendment filed on 07/21/2008. Claims 1 and 7 have been amended. Claims 11 and 12 have been canceled.

Claims 1-10 are therefore currently pending in the present application.

Response to Arguments

Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Leapman et al. (U.S. Patent Application Publication # 2003/0198008)** in view of **Baker (U.S. Patent # 5,815,735)** in further view of **Hailey et al. (U.S. Patent # 6,507,495)**.

Consider **claim 1**, Leapman et al. a wireless human-machine interactive device of personal computer comprising, a display and a base, in which the display can be independently used separately from the base (Abstract, Figure 1, [0005], and [0014]-[0015]), wherein:

a display output module comprising at least a central processing unit (CPU) and a liquid crystal display (LCD), a main board containing a supply circuit for providing a voltage conversion for the main board and charging a secondary battery, a backlight board, a touch screen control board, a peripheral interface board comprising all Input/Output (I/O) device interfaces and a secondary battery are mounted on a rear part of the display (Figure 1, Figure 2, Figure3, [0014]-[0015], [0019]-[0020], [0023]-[0024], and [0026]-[0028]); the main board comprises a switch circuit and a graphic display chip ([0017]-[0018], and [0023]);

an LCD control board and a supply adapter for converting a commercial supply into a direct current (DC) supply and supplying power to the LCD control board are mounted in the base ([0014]-[0016], [0020]-[0021], and [0026]-[0027]).

However, Leapman et al. fail to teach the base and the display are electrically connected by gilded pins (golden finger) or a multi-pin/multi-jack connector; and when the display main body is separated from the base, the switch circuit on the main board sends an LVDS signal output from the graphic display chip directly to the LCD display screen for imaging.

In the related art, Baker teach the electrical connections between the base and the display are achieved by gilded pins (golden finger) or a multi-pin/multi-jack connector; and when the display main body is separated from the base, the switch circuit on the main board sends an LVDS signal output from the graphic display chip directly to the LCD display screen for imaging (Abstract, Figure 2, Figure 4, Figure 5, column 2 lines 2-32, column 4 lines 38-53, column 4 lines 62-67, and column 5 lines 1-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Baker into the teachings of Leapman et al. for the purpose of providing a removable display screen that may be used in the normal manner with the computer or detached therefrom and utilized as the display structure in a docking station-based computing station separately incorporating the base portion of the computer.

Leapman et al. as modified by Baker fail to teach the graphic display chip simultaneously supports the output of a LVDS digital signal and VGA analog signals of the VGA signals and simultaneously outputting the VGA analog signals to a VGA interface for use by an image display device.

In the related art, Hailey et al. teach the graphic display chip simultaneously supports the output of a LVDS digital signal and VGA analog signals of the VGA signals and simultaneously outputting the VGA analog signals to a VGA interface for use by an image display device (column 7 lines 40-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Hailey et al. into the teachings of Leapmann et al. as modified by Baker for the purpose of translating and coordinating between various buses and/or devices which communicate through the bridges.

Consider **claim 2, as applied to claim 1 above**, Leapman et al. as modified by Baker and further modified by Hailey et al. further teach wherein a memory, a full-duplex wireless communication module, a data receiver and decompressor module, a audio output module, a bus extension port and a peripheral interface circuit module are further mounted on the main board in said display (Leapman et al. – Figure 1, Figure 2, Figure 3, [0015], [0017], [0019], and [0026]-[0029]).

Consider **claim 3, as applied to claim 1 above**, Leapman et al. as modified by Baker and further modified by Hailey et al. further teach wherein control keys for a display screen and an indicative light circuit board are further mounted on said peripheral interface board (Leapman et al. – Figure 1, [0015], [0019], [0023]-[0024], and [0026]).

Consider **claim 4, as applied to claim 1 above**, Leapman et al. as modified by Baker and further modified by Hailey et al. further teach a display except wherein a thickness of said display is no more than 25 millimeters.

Nonetheless, to the extent that Leapman et al. as modified by Baker and further modified by Hailey et al. does not specify exact measures of the thickness of the display, this figure would have been a matter of routine experimentation to one of ordinary skill in the art at the time the invention was made, in order to provide a thin, light weight and portable display that is separable from the base that takes less space on a users desktop. See In re Aller, 105 USPQ 233 (CCPA 1955) (Where general conditions of the claim are disclosed in the prior art, it is not inventive to discover optimal or workable ranges by routine experimentation).

Consider **claim 5, as applied to claim 1 above**, Leapman et al. as modified by Baker and further modified by Hailey et al. further teach wherein the main board of said display forms a wireless data communication connection link directly with a main body of the personal computer, and forms information exchange links with circuits on the LCD control board within the base through the gilded pins (golden finger) or the multi-pin/multi-jack connector between the display and the base (Leapman et al. – Figure 1, and [0016]-[0017]; Baker - Abstract, Figure 2, Figure 4, Figure 5, column 2 lines 2-32, column 4 lines 38-53, column 4 lines 62-67, and column 5 lines 1-5).

Consider **claim 6, as applied to claim 1 above**, Leapman et al. as modified by Baker and further modified by Hailey et al. further teach the secondary battery mounted on the rear part of said display (Leapman et al. – Figure 1, and [0020]).

Nonetheless, the Examiner takes Official Notice of the fact that a battery can be a three-series one-parallel one.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a three-series one-parallel one for the battery taught by Leapman et al.

as modified by Baker and further modified by Hailey et al. for the purpose of reducing the weight of the display.

Consider **claim 7**, Leapman et al. teach a liquid crystal display of personal computer comprising, a display main body and a base, wherein a backlight board, control keys for a display screen and a indicative light circuit board are mounted on a rear part of said display main body; the main board comprises a switch circuit and a graphic display chip ([0017]-[0018], and [0023]); an LCD control board and a power supply board are mounted in the base (Figure 1, Figure 2, Figure3, [0014]-[0016], [0019]-[0021], [0023]-[0024], and [0026]-[0029]).

However, Leapman et al. fail to teach the base and the display are achieved by gilded pins (golden finger) or a multi-pin/multijack connector; and when the display main body is separated from the base, the switch circuit on the main board sends an LVDS signal output from the graphic chip directly to the LCD display screen for imaging.

In the related art, Baker teach the electrical connections between the base and the display are achieved by gilded pins (golden finger) or a multi-pin/multi-jack connector; and when the display main body is separated from the base, the switch circuit on the main board sends an LVDS signal output from the graphic chip directly to the LCD display screen for imaging (Abstract, Figure 2, Figure 4, Figure 5, column 2 lines 2-32, column 4 lines 38-53, column 4 lines 62-67, and column 5 lines 1-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Baker into the teachings of Leapman et al. for the purpose of providing a removable display screen that may be used in the normal manner

with the computer or detached therefrom and utilized as the display structure in a docking station-based computing station separately incorporating the base portion of the computer.

Leapmann et al. as modified by Baker fail to teach the graphic chip simultaneously supports the output of a LVDS digital signal and analog signals of the VGA signals and simultaneously outputting the VGA analog signals to a VGA interface for use by an image display device.

In the related art, Hailey et al. teach the graphic chip simultaneously supports the output of a LVDS digital signal and analog signals of the VGA signals and simultaneously outputting the VGA analog signals to a VGA interface for use by an image display device (column 7 lines 40-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Hailey et al. into the teachings of Leapmann et al. as modified by Baker for the purpose of translating and coordinating between various buses and/or devices which communicate through the bridges.

Consider **claim 8, as applied to claim 7 above**, Leapman et al. as modified by Baker and further modified by Hailey et al. further teach further teach a display except wherein a thickness of said display main body is no more than 25 millimeters.

Nonetheless, to the extent that Leapman et al. as modified by Baker and further modified by Hailey et al. further teach does not specify exact measures of the thickness of the display, this figure would have been a matter of routine experimentation to one of ordinary skill in the art at the time the invention was made, in order to provide a thin, light weight and portable display that is separable from the base that takes less space on a users desktop. See In re Aller, 105 USPQ

233 (CCPA 1955) (Where general conditions of the claim are disclosed in the prior art, it is not inventive to discover optimal or workable ranges by routine experimentation).

Consider **claim 9, as applied to claim 1 above**, Leapman et al. as modified by Baker and further modified by Hailey et al. further teach wherein at least one of the central processing unit (CPU), the main board, the backlight board, the touch screen control board, the peripheral interface board, and the secondary battery is mounted on a rear part of the display (Leapman et al. – Figure 1, Figure 3, and [0025]-[0029]).

Consider **claim 10, as applied to claim 1 above**, Leapman et al. as modified by Baker and further modified by Hailey et al. further teach wherein the central processing unit (CPU), the main board, the backlight board, the touch screen control board, the peripheral interface board, and the secondary battery are mounted on a rear part of the display (Leapman et al. – Figure 1, Figure 3, and [0025]-[0029]).

Comment [Y1]: Insert form para. 07.40, to indicate that this action is final in which is necessitated by amendment

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: see PTO-892 Notice of References Cited.

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building

401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to April S. Guzman whose telephone number is 571-270-1101. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/April S. Guzman/
Examiner, Art Unit 2618